JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
11131061/00	P	C424	CD-289340	00 of 06	2

CONTRACTOR : ABB CONTRACTING CO. LTD.

CUSTOMER : NATIONAL GRID – SAUDI ARABIA / SEC–COA

PROJECT : REINFORCEMENT OF EXISTING 132/33kV SUBSTATION #8501
AL–MAJMAH SUBSTATION

CONTRACT NO. : –

PLANT NO. : C424

JOB ORDER NO. : 11131061/00

PANEL NAME : NEW 220/127V AC POWER PANEL
CONTROL ROOM
(SINGLE LINE DIAGRAM)

NOTES

شركة إيه بي بي للمقاولات المحدودة
ABB Contracting Co., Ltd.
P.O. Box 91926 Riyadh 11643
Tel: 2653030
C.R.1010028640

REFERENCE DRAWINGS

DRAWING TITLE	DRAWING NO.
DRAWING CONTROL SHEET	CE-289148
ONE LINE DIAGRAM - AC AUXILIARY SYSTEM	CA-289209

AS-BUILT BY - DATE -

REV. NO.	DATE	BY	DESCRIPTION	CHKD.	CERT.	APPD.
2	25.11.13	EMM	REV.AS PER NEW CUSTOMER SLD (CA-289209 REV.01)	BG	BG	DA
1	29.04.13	EMM	REV. AS PER COMMENTS	BG	BG	DA
0	16.02.13	EMM	ISSUED FOR APPROVAL	CV	CV	DA

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نقل الكهرباء
National Grid SA

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DATE STARTED 16.02.2013 DATE COMPLETED -

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SINGLE LINE DIAGRAM COVER PAGE

NEW 220/127V POWER PANEL / CONTROL ROOM

REINFORCEMENT OF EXISTING 132/133KV S/S #8501 AL-MAJMAH S/S

RIYADH SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
11131061/00	P	C424	CD-289340	00 of 06	2

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JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
11131061/00	P	C424	CD-289340	01 of 06	2

SHEET	DESCRIPTION	REVISION						
		0	1	2	–	–	–	–
0	COVER SHEET	X	X	X				
1	INDEX	X	X	X				
2	LEGEND & SYMBOLS	X	X	X				
3	SINGLE LINE DIAGRAM	X	X	X				
4	SINGLE LINE DIAGRAM	X	X	X				
5	SINGLE LINE DIAGRAM	X	X	X				
6	SINGLE LINE DIAGRAM	X	X	X				
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INDEX

NEW 220/127V POWER PANEL / CONTROL ROOM

REINFORCEMENT OF EXISTING 132/133KV S/S #8501 AL-MAJMAH S/S

RIYADH SAUDI ARABIA

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Q... K51 PR111/LSIG YC YO — ACB,D/O TYPE

Q... — MOULDED CASE CIRCUIT BREAKER

T... — CURRENT TRANSFOMER

Q... — MNIATURE CIRCUIT BREAKER FOR CONTROL CIRCUIT

K... — RELAY COIL

K... — TIME DELAY RELAY DELAY ON PICK-UP

P... (A) — AMMETER

P... (V) — VOLTMETER

-27/59 — UNDER/OVER VOLTAGE RELAY

-27 — UNDER VOLTAGE RELAY

Q..., K... — MAKE CONTACT

Q..., K... — BREAK CONTACT

Q..., K... — CHANGE-OVER CONTACT

K... — MAKE CONTACT DELAYED WHEN OPERATING

K... — BREAK CONTACT DELAYED WHEN OPERATING

W... — SOCKET OUTLET

W... — PLUG

off man auto S... — SELECTOR SWITCH

S... — PUSHBUTTON SPRING RETURN

S... — VOLTMETER/AMMETER SELECTOR SW.

TR — TOROIDAL CT FOR EARTH FAULT PROT.

S75I/1 — ACB "IN SERVICE" CONTACT

SY — ACB TRIP CONTACT

C1 YC C2 — ACB CLOSING COIL

C11 YO C12 — ACB OPENING COIL

S33M U1 U2 — ACB MOTOR CIRCUIT

X1 X2 — INDICATION LAMP

2 1 — BLOCKING DIODE

B1 5 6 3 — THERMOSTAT

E1 — SPACE HEATER

DS1 — DOOR SWITCH

NEUTRAL LINK

N Tn — FOR EARTH FAULT PROT. EXTERNAL NEUTRAL CT

K51G — RD1 EARTH FAULT PROT. RELAY

AY — SHUNT OPEN INC. RELEASE SUPERVISION RELAY

X... ø — TERMINAL BLOCK

LSIG PR212/P YC YO — MOULDED CASE CIRCUIT BREAKER ELECTRONIC RELEASE WITH MOTOR

MINIATURE CIRCUIT BREAKER

NOTES

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LEGEND & SYMBOLS

NEW 220/127V POWER PANEL / CONTROL ROOM

REINFORCEMENT OF EXISTING 132/133KV S/S #8501 AL-MAJMAH S/S

RIYADH SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
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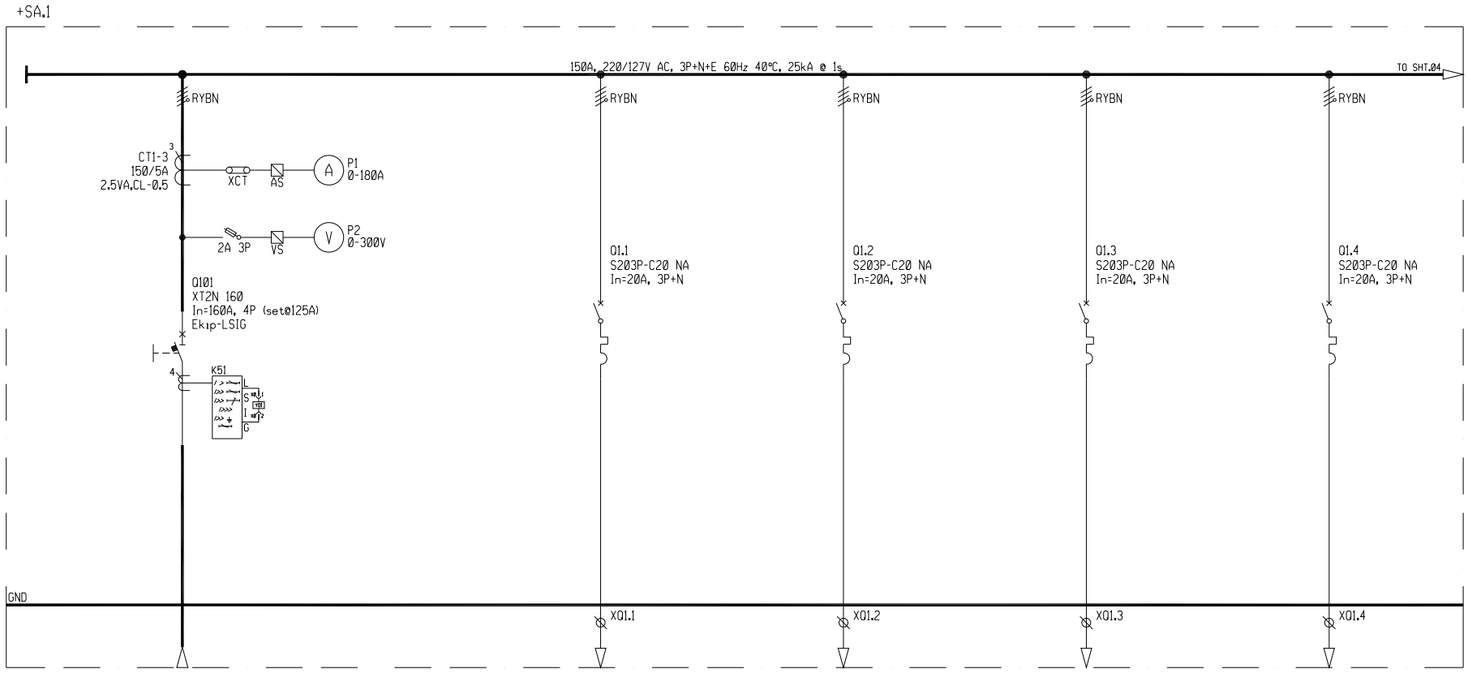

EQUIPMENT LABEL	-	-	-	-	-
ITEM DESCRIPTION	FROM EXISTING ACSB +SA.6 FEEDER Q4 - - -	LOCAL CONTROL CABINET (OLTC DRIVE -GT3) - -	LOCAL CONTROL CABINET (AC AUXILIARY SUPPLY FOR LTG, HEATER, RECEPT-GT3) -	LOCAL CONTROL CABINET (XFMR COOLING FANS-GT3) - -	SUMP PUMP-3 (GT3 AREA) - - -
RATING (A, kW, kVA)	125A	20A	20A	20A	20A
CUBICLE LOCATION	+SA.1	+SA.1	+SA.1	+SA.1	+SA.1
MODULE SIZE	-	-	-	-	-
MODULE LOC.	-	-	-	-	-
CABLE SIZE	4Cx50sq.mm	4Cx10sq.mm	4Cx10sq.mm	4Cx10sq.mm	4Cx10sq.mm

NOTES

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ONE LINE DIAGRAM - AC AUXILIARY SYSTEM	CA-289209

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BY - DATE -

SINGLE LINE DIAGRAM

NEW 220/127V POWER PANEL / CONTROL ROOM

REINFORCEMENT OF EXISTING 132/133KV S/S #8501 AL-MAJMAH S/S

RIYADH SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
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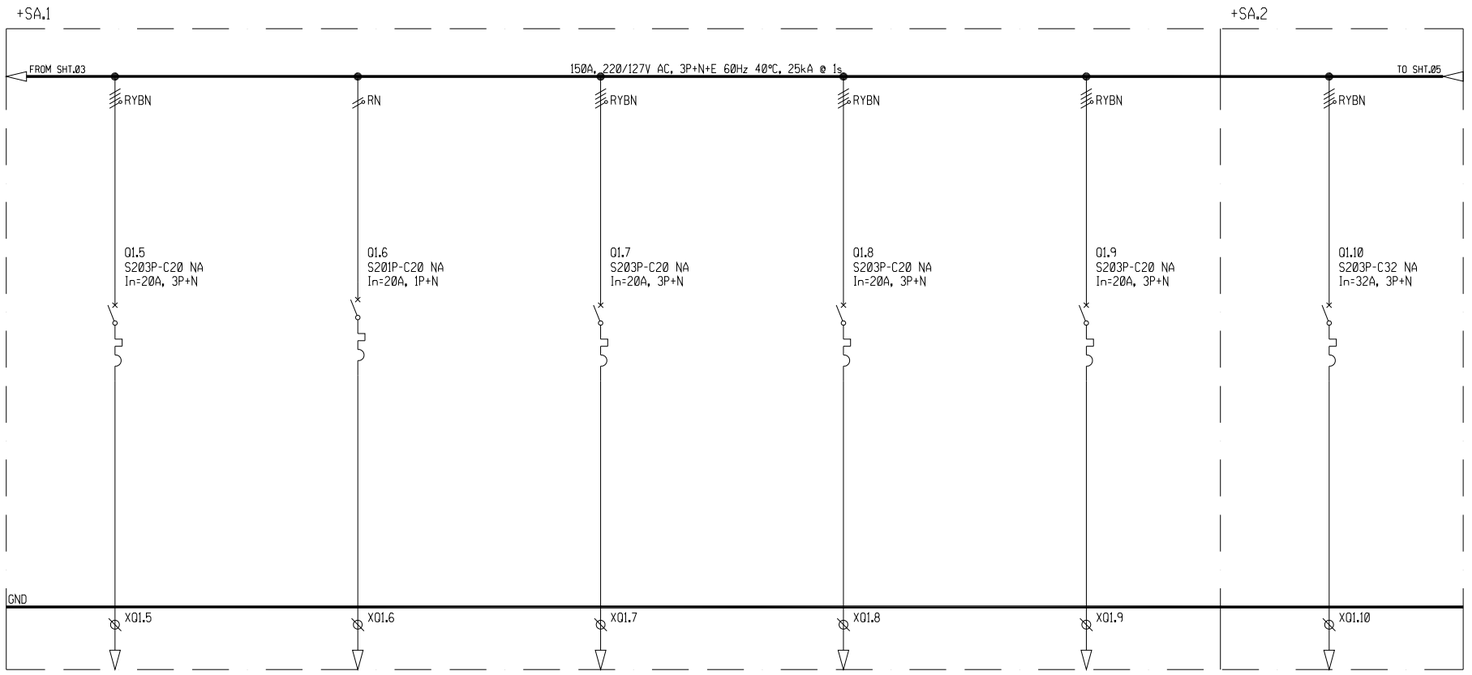

EQUIPMENT LABEL	-	-	-	-	-	-
ITEM DESCRIPTION	220V 20A INSPECTION LAMP RECEP.-NEW GT3 - -	127V, 20A INSPECTION LAMP RECEP.-NEW GT3 - -	AC AUXILIARY SUPPLY FOR 33kV SWITCHGEAR PANELS, SECTION-C - -	AC AUXILIARY SUPPLY FOR 33kV SWITCHGEAR PANELS, SECTIONALIZER - -	AC AUXILIARY SUPPLY FOR 33kV SWITCHGEAR PANELS, BUS RISER - -	SPLIT UNIT-EXTENSION OF 33kV SWGR ROOM - -
RATING (A, kW, kVA)	20A	20A	20A	20A	20A	32A
CUBICLE LOCATION	+SA.1	+SA.1	+SA.1	+SA.1	+SA.1	+SA.2
MODULE SIZE	-	-	-	-	-	-
MODULE LOC.	-	-	-	-	-	-
CABLE SIZE	4Cx10sq.mm	2Cx10sq.mm	4Cx10sq.mm	4Cx10sq.mm	4Cx10sq.mm	4Cx35sq.mm

NOTES

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SINGLE LINE DIAGRAM

NEW 220/127V POWER PANEL / CONTROL ROOM

REINFORCEMENT OF EXISTING 132/133KV S/S #8501 AL-MAJMAH S/S

RIYADH SAUDI ARABIA

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
11131061/00	P	C424	CD-289340	04 of 06	2

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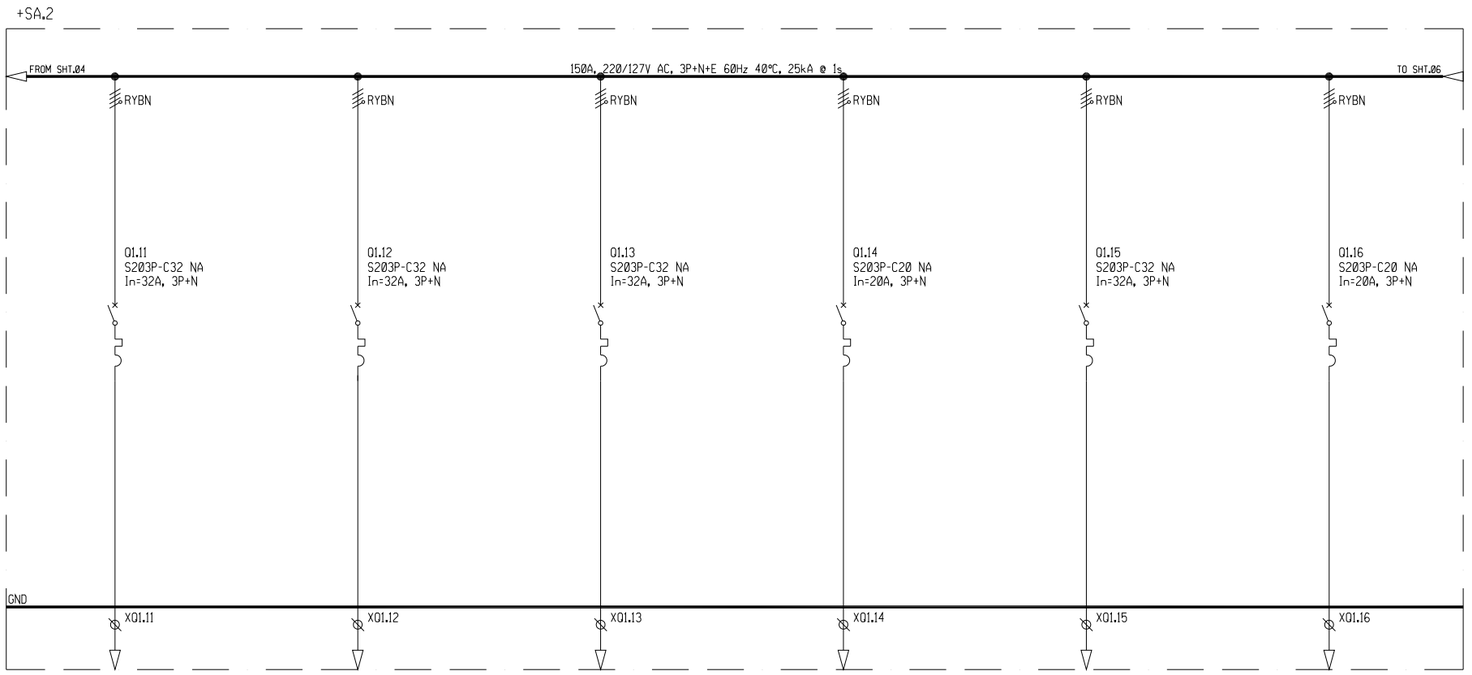
SEC-D (2004/10)

DMS VECTOR SECD00

JOB ORDER NO.	INDEX	PLANT NO.	DRAWING NUMBER	SHEET NO.	REV. NO.
11131061/00	P	C424	CD-289340	05 of 06	2



EQUIPMENT LABEL	-	-	-	-	-	-
ITEM DESCRIPTION	SPLIT UNIT-EXTENSION OF 33kV SWGR ROOM - -	SPLIT UNIT-EXTENSION OF 33kV SWGR ROOM - -	SPLIT UNIT-EXTENSION OF 33kV SWGR ROOM - -	SPARE - - -	SPARE - - -	SPARE - - -
RATING (A, kW, kVA)	32A	32A	32A	20A	32A	20A
CUBICLE LOCATION	+SA.2	+SA.2	+SA.2	+SA.2	+SA.2	+SA.2
MODULE SIZE	-	-	-	-	-	-
MODULE LOC.	-	-	-	-	-	-
CABLE SIZE	4Cx35sq.mm	4Cx35sq.mm	4Cx35sq.mm	-	-	-

NOTES

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SINGLE LINE DIAGRAM

NEW 220/127V POWER PANEL / CONTROL ROOM

REINFORCEMENT OF EXISTING 132/133KV S/S #8501 AL-MAJMAH S/S

RIYADH SAUDI ARABIA

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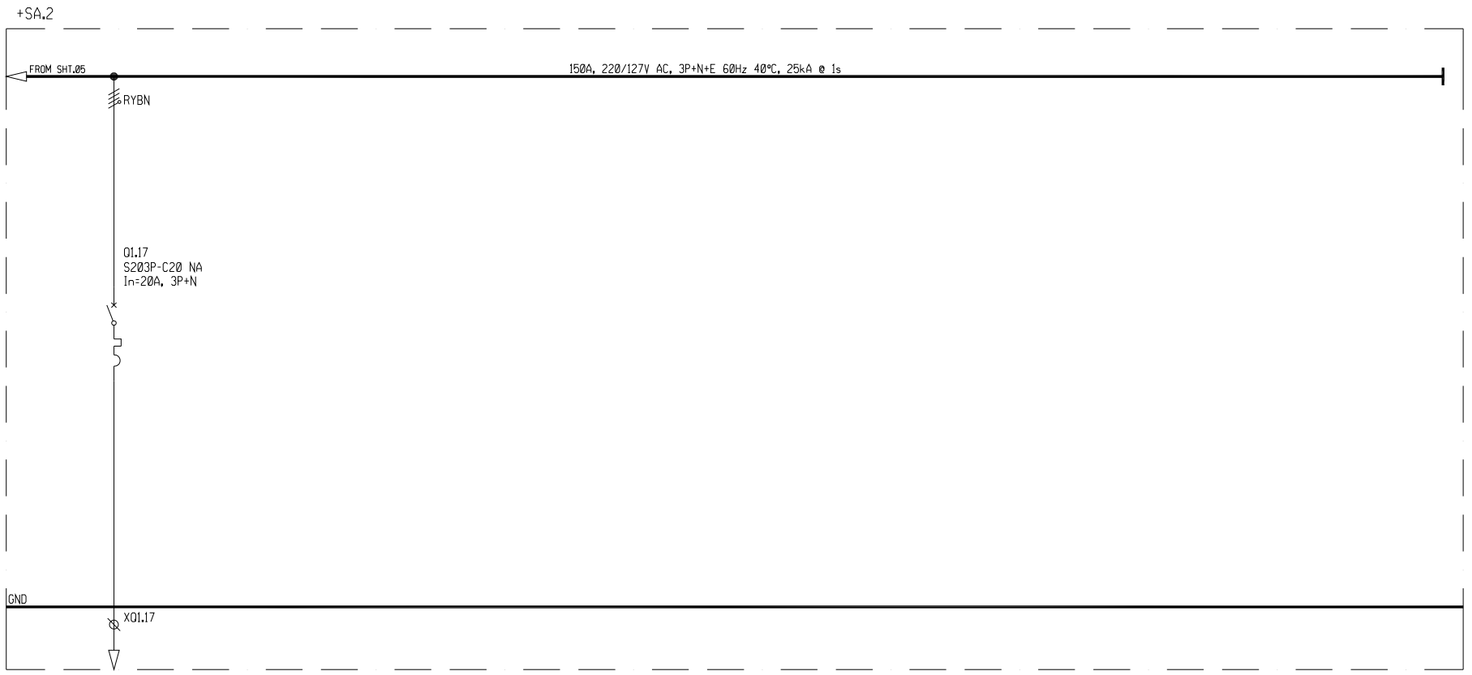

EQUIPMENT LABEL	-
ITEM DESCRIPTION	SPARE - - -
RATING (A, kW, kVA)	20A
CUBICLE LOCATION	+SA.2
MODULE SIZE	-
MODULE LOC.	-
CABLE SIZE	-

NOTES

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SEC-D (2004/10)

DMS VECTOR SECD00

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